Portneuf River TMDL Implementation Plan

assembled by:

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TOTAL MAXIMUM DAILY LOAD IMPLEMENTATION PLAN
Idaho Transportation Department
District 5, Pocatello
For State Highways and Local Public Roads in the Portneuf River Watershed

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OVERVIEW

The mission of the Idaho Transportation Department (ITD) is to provide high quality, cost-effective transportation systems that are safe, reliable, and responsive for the economical and efficient movement of people and products. ITD's operations include the highest possible level of environmental quality while serving the transportation needs of a growing population. ITD also provides local transportation agencies with planning support and contract administration services for Federally funded activities associated with local roads. For the Portneuf River Implementation Plan, ITD will be working with local agencies that include Bannock and Caribou Counties as well as the cities of Arimo, Bancroft, Downey, Inkom, Lava Hot Springs and McCammon, and the Downey-Swan Lake Highway District.

Inherent to ITD's mission and operations is the protection of the natural and human environment. ITD operates in compliance with all associated Federal, State, and local rules and regulations. Due to the hydrology and geomorphology in southeastern Idaho, compliance can be particularly challenging when dealing with environmental protection.

The effects of State and local roadway infrastructure on environmental quality is predominantly dictated by past roadway corridor development. For the most part, highway corridors are well established and will continue to influence environmental baseline conditions. Maintenance activities and roadway improvement projects on existing routes do pose some risk of additional adverse impact to these systems, primarily from short-term construction related sediment discharges. ITD's response to this risk has been and will continue to be a comprehensive effort to control erosion and manage sediment within construction limits.

In some cases, adverse environmental impacts resulting from previous construction of transportation systems near bodies of water may be correctable through beneficial stream channel and floodway alterations and/or reclamation actions. These may include but are not limited to the use of biological and physical stabilization techniques, as well as realignment and subsequent removal of original roadway fill material. Such opportunities have not been formally identified but a few may exist on the State highway system and within local roadway corridors.

This Total Maximum Daily Load (TMDL) Implementation Plan identifies various commitments made by ITD and local transportation agencies to prevent, and in some cases reduce sediment discharges to the Portneuf River watershed. ITD's TMDL commitments are based on existing ITD policies for erosion and sediment control, an acknowledgment of new and improved erosion and sediment control products and practices, and a proactive effort to inventory and correct existing problem areas. A timeline

COMMITMENT TO WATER QUALITY

ITD is directed to implement effective erosion and sediment control practices by requirements set forth in the following ITD policies and standards:

- ITD-Admin. Policies A-04-07 and A-04-05 (Environmental Monitoring)
- ITD-DOH Memo No. E2 (Erosion and Sedimentation Control)
- ITD's Design Manual

Point and nonpoint source discharges from many State and local projects are subject to existing environmental requirements such as Clean Water Act Sections 402 (EPA-NPDES) and 404 (Army Corps of Engineers-Dredge and Fill), Idaho non-point source regulations, and local storm water and floodplain ordinances. National Environmental Policy Act (NEPA) requirements apply to all ITD and local agency projects that use Federal Aid funding, as administered by the Federal Highway Administration (FHWA). All of these requirements reinforce ITD's commitment to environmental protection. Table 1 documents inter- and intra-agency coordination and commitments from project development through construction.

TRAINING

Training for the District Environmental Planning Section includes courses in design, inspection, and regulations. Some courses offered to ITD planners, local agencies, consultants, and contractors are:

- Sediment Control/Wetland Workshop – Idaho Department of Environmental Quality
- NPDES Storm Water Management - ITD
- BMP Training - ITD
- Stormwater Design to Protect Watersheds – Environmental Protection Agency
- Fish Passage Structure Course – FHWA
- Riparian Zone Ecology, Restoration & Management – Natural Resource Conservation Service
- River Channels: Form and Process – Luna Leopold, Teton Science School
- Clean Water Act/Wetlands for Planners - US Army Corps of Engineers
- Federal Wetland Policy/404 Permits – US Army Corps of Engineers
- Basic Wetland Delineation – Wetland Training Institute
- Wetland Plant Identification – Natural Resource Conservation Service
- Basic Hydric Soils & Hydric Soils for Wetland Delineation – US Army Corps of Engineers
- Watershed Funding Workshop – Environmental Finance Center, Boise State University
- Endangered Species Act & Biological Assessment – US Fish and Wildlife Service

The Design Section develops and manages the development of the plans and specifications for State and Federally funded construction projects. The ITD designers and project managers attend training in the following areas to enhance their knowledge and awareness of environmental issues:

- Project Development and Environmental Documentation - ITD
- Culvert Design - FHWA
- NPDES Storm Water Management - ITD
- Stormwater Design to Protect Watersheds – EPA
- Fish Passage Structure Course – FHWA
- Sediment Control/Wetland Workshop - IDEQ

Project Inspectors at ITD are required to complete an Inspector Qualification Program. Since both Construction and Maintenance personnel are responsible for inspecting projects, both sections are trained under this program. These courses are also open to local agencies, consultants, and contractors. The following Qualification Areas pertinent to Best Management Practices (BMP) are taught by ITD trainers:

- NPDES/Storm Water Inspector Training - ITD
- Wetland Identification and Regulation for ITD Inspectors - ITD
- Hazardous Materials - ITD

Some ITD employees attend training taught by the National Highway Institute, a section of the Federal Highway Administration. Some example courses are:

- Highways in the River Environment
- Stormwater Pump Station Design
- Fundamentals of Air Quality for Highway Planning and Project Development
- Workshop on Transportation /Air Quality Analysis
- Functional Assessment of Wetlands (WET II)
- Managing the Environmental Process
- Stream Stability and Scour at Highway Bridges for Bridge Inspectors
- Urban Drainage Design
- Culvert Design

ITD, in cooperation with the U.S. Forest Service (USFS), will develop a workshop on the construction and maintenance of gravel roads to minimize erosion and sediment transport. This workshop will be available local agencies listed in the Overview Section.

MONITORING AND EVALUATION

With respect to sediment load allocations, ITD's TMDL monitoring and evaluation effort follows existing ITD administrative policies and procedures for erosion and sediment control (i.e., Admin. Policy A-04-07, Environmental Monitoring). These policies describe intra-agency coordination procedures for ITD's Project Development, Construction, and Maintenance staff involved with erosion and sediment control planning, implementation, and BMP effectiveness monitoring. The most notable element of these policies is the assignment of an Environmental Inspector on all construction activities. ITD's environmental inspections will continue to improve with the current trend of increased collaboration among Environmental Planners, Design Engineers, Construction Engineers, Inspectors, and reviewing agencies. Frequent BMP inspections by these multidisciplinary teams will continue to facilitate proper BMP maintenance and will provide critical feedback needed to ensure compliance with non-point source pollution regulations.

COSTS AND FUNDING

The cost of ITD's portion of the TMDL Implementation Plan will be funded from existing transportation programs. ITD anticipates minimal additional expense because of this plan. Effective erosion and sediment control is not limited by project funding. Costs of erosion and sediment control practices and/or water quality improvement projects will be commensurate with the need to abate or correct particular water quality concerns in the Portneuf watershed as they become apparent. ITD typically

spends an average of five percent to ten percent of project costs on erosion and sediment control devices, mitigation, and monitoring.

Priority projects to improve water quality, as identified by ITD and local agencies during annual field inspections, may qualify for enhancement funds provided by TEA-21 or other Federal funding sources. ITD and local agencies will seek such funding on an ongoing basis. Local agencies are expected to pursue grants and other funding sources should State and Federal funds not be available.

PUBLIC INVOLVEMENT

The ITD District 5 Environmental Planner attends the monthly Portneuf Watershed Advisory Group (WAG) meeting. This lends opportunity to hear public concerns and the ability to address these concerns in a timely manner. Mitigation opportunities often surface through discussion with agencies and the public that attend the WAG meetings.

As a State agency, all of ITD's operations involve the public. Most, if not all, of ITD's moderate to large scale projects include public involvement plans and well-advertised public meetings and/or hearings. In addition, Federally funded projects, which comprise the majority of ITD's projects, are subject to formal public involvement requirements set forth by FHWA. ITD continues to welcome and seek comment and review of its projects and erosion control policies and practices by the public and public agencies. The ITD District 5 office is located at 5151 S. 5th Avenue in Pocatello and is open weekdays between the hours of 8:00 am and 5:00 pm. Engineering and Environmental staff can be reached by telephone at (208) 239-3300.

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D TMDL MANAGEMENT MEASURES AND PARTICIPATION

ANAGEMENT MEASURES	ITD D5	LOCAL AGENCIES	ITD HQ	Contractor	FHWA	DEQ	Frequency or *Completion Tim
ITD-D5 SEDIMENT CONTROL BMPS, ROCEDURES, AND REVIEWS							
Revise ITD-BMP Catalog and provide ining	X		X				*06/02
Emphasize the following: • use of erosion and sediment control devices • protection of buffer zones • effective use of perimeter controls • specify erosion protection for runoff channels • rock armor erodible areas in and near concentrated flows • frequent use of check dams and sediment traps • use fast establishing cover crops • use retaining walls to avoid wetlands and streams where feasible	X		X				Every project
ITD preliminary design reviews	X		X				Every project
ITD final design reviews	X		X			Request	Every project
Environmental clearances (EISs, EAs, Cat .)	X		X		X		Every project
Plans, specification and estimates (PSE) views	X		X			Request	Every project
Pre-construction conferences	X			X		Request	Every project
Environmental inspections	X		X	X	X	Request	Every project
404 compliance	X			X			Every project
NPDES compliance	X			X			Every project
TMDL compliance review	X					X	Annually
CONSTRUCTION CONTRACTS							
Stricter winter shutdown specifications d scheduling on large earthwork jobs	X			X			As needed
Construction staging plans	X			X			Every project
ITD/LOCAL AGENCY WATER UALITY IMPROVEMENT							
ITD/Highway District MOA	X	X					*02/03
Develop list of known problem areas	X	X					*03/03
Annual evaluation of known or suspected oblem areas	X	X					Spring of each year
List of future projects in TMDL tersheds	X	X					Ongoing
Planning and implementation of water ality enhancement projects	X	X					Ongoing

Appendix A

TIMELINE FOR IMPLEMENTATION

Idaho Transportation Department – District 5, Pocatello

1. Inventory roads and areas of sediment contribution
   Direct – roads, culverts
   Indirect – stormwater runoff from construction or maintenance projects
2. Remedy problem areas identified in survey
   Expected reductions – Not known at this time
   Cost – survey and remediation will be covered by State and Federal funds
3. Continue ongoing training for Planners, Designers, Inspectors, and Maintenance employees to stay current on erosion and sediment control issues, products, and procedures.
4. Timeline

Year 1	Survey roads and culverts to identify areas of sediment contribution ITD and U.S. Forest Service gravel road workshop development
Year 2	Continue road and culvert survey Budget or program funds for projects in problem areas identified
Year 3	Begin work on problem areas (e.g., replace culverts, stabilize banks) Budget or program funds for projects in problem areas identified
Year 4-9	Continue working on problems areas Budget or program funds for projects in problem areas identified
Year 10	Complete work identified by survey

County Highway and Highway District

1. Inventory roads and areas of sediment contribution
   Direct – roads, culverts
   Indirect – stormwater runoff from construction or maintenance projects
2. Remedy problem areas identified in survey
   Expected reductions – Not known at this time
   Cost – will seek State, Federal, and other funding avenues
3. Timeline

Year 1	Survey roads and culverts to identify areas of sediment input Seek funding and write grants for funding remediation
Year 2	Continue road and culvert survey Budget for problem areas identified in survey
Year 2-9	As funds become available, begin working on problem areas Attend workshops on erosion and sediment control issues, products, and procedures
Year 10	Complete work identified by survey

Idaho Department of Environmental Quality/ Southeastern District Health Department Implementation Plan

State Water Quality Standards for Bacteria

406 *E. coli* organisms per 100 ml of water triggers further testing
126 *E. coli* organisms per 100 ml of water (geometric mean) results in a violation

Area of concern

303(d) list; Portneuf River – Fort Hall Reservation boundary to Chesterfield Reservoir

Identified in TMDL: Portneuf River – Lava Hot Springs to Pocatello, Downey Canal; Pocatello Creek; Mink Creek; Marsh Creek; Pebble Creek

Possible sources and party responsible for providing plan for implementing corrective actions

Human
- Sewage treatment plants – Cities of Pocatello, Inkom, and Lava Hot Springs
- Stormwater – City of Pocatello
- Urban septic systems – City of Pocatello
- Rural septic systems - DEQ in conjunction with Southeastern District Health Department

Animal
- Confined Animal Feeding Operations (CAFO) and Animal Feeding Operations (AFO) – Soil Conservation Commission

Wildlife
- Unknown – DEQ

Plan

1. Monitor mainstem Portneuf River as to *E. coli* state water quality standard exceedances – DEQ and City of Pocatello
   - Cost – unknown
   - Funding – various sources (e.g., City of Pocatello, DEQ)
2. Begin locating new septic systems in Portneuf River subbasin using geographic positioning system (GPS) – District Health
   - Cost – none
   - Funding – District Health
3. Survey existing septic system locations within Portneuf River Subbasin – District Health
   - Cost – unknown
   - Funding – unknown
4. Classify septic systems as to proximity to stream reaches with high bacteria counts – DEQ
   - Cost – unknown
   - Funding – DEQ

5. From survey and District Health records – District Health
- identify permitted and non-permitted systems
- categorize permitted systems based on age and potential for failure
- prioritize systems based on potential to contribute to pollutant loads

   Cost – unknown
   Funding - unknown
6. Conduct interviews with non-permitted septic system owners and owners of high priority systems – District Health
   Cost – unknown
   Funding - unknown
7. Perform other testing as needed to determine possible septic input to receiving waterbody – DEQ and District Health
   Cost – unknown
   Funding - unknown

Timeline

2003
City of Pocatello
Monitor *E. coli* levels in Portneuf River in and through the city. Identify, where possible, sources of bacteria loading into the river.

2004
DEQ
Monitor May to September mainstem Portneuf River at Inkom
If trigger concentration of 406 organisms per 100 ml of water is reached, increase monitoring to include tributaries within the affected reach
District Health
Begin locating new septic systems using GPS equipment

2005
District Health (if funding available)
Survey existing septic system locations in Portneuf River Subbasin
Identify permitted and non-permitted systems
Categorize permitted systems based on age and potential for failure
Prioritize systems based on potential to contribute to pollutant loads

2006
DEQ
Classify septic systems as to proximity to stream reaches with high bacteria counts
District Health (if funding available)
Conduct interviews with non-permitted septic system owners and owners of high priority systems

2007
District Health (if funding available)
Finish interviews with non-permitted septic system owners and owners of high priority systems

2008
DEQ and District Health (if funding available)
Perform other testing as needed to determine possible septic input to receiving waterbody

2009-2012
Implement actions to correct problem septic systems (if funding available)